ence is relevant. Leading commercial firms keep their programs on track by making the technology push and taking risks before the program is launched — not within the bounds of a program whose purpose is to put end items in production.

Technology development's pace and resource requirements are hard to gauge; failures are expected in the discovery process. In a product development or a weapon system, on the other hand, success is expected. Concomitant with defining the program launch later in the acquisition cycle must be the willingness of decision makers in DoD and the Congress to support research and development efforts to advance technology outside of individual programs.

Confront Risks Early

Second, once a program is underway, program managers must be encouraged to identify unknowns as high risks so that they can be aggressively worked on earlier in development. In commercial programs, the threat of the customer walking away forces program managers to confront risks candidly and attack them early. Discipline is provided from within the programs. To help create a

similar situation on weapon system programs, DoD must send the signals that create incentives for acquisition managers to identify unknowns and ameliorate their risks in early development. The more powerful vehicles for sending these signals may be decisions on individual programs, rather than broad policy announcements.

For example, incentives could take the form of a decision to fully fund one program's efforts to mitigate a high risk identified early or requiring another program in which risks are revealed late to absorb the associated financial consequences. The indicators we used in the three knowledge points are one way to identify such risks earlier. Congress will need to back these incentives with its actions.

Better Position to Succeed

The goals of better, faster, and cheaper, are admirable and desirable. Yet they will not succeed if they are mainly additive; that is, if weapon system program managers and program teams are simply asked to do more. Leading commercial firms achieved these goals because they asked their program managers to do less: to develop the product, not to develop technology and defend the program as

well. The key to achieving similar goals on weapon systems may well be fostering an environment within DoD that puts its program offices in a better position to succeed.

ENDNOTES

- 1. The Readiness and Management Support Subcommittee has taken responsibility for these issues in the current Congress.
- 2. Best Practices: Successful Application to Weapon Acquisitions Requires Changes in DoD's Environment (General Accounting Office/National Security and International Affairs Division [GAO/NSIAD]-98-56, Feb. 24, 1998) and Best Practices: Better Management of Technology Development Can Improve Weapon System Outcomes (GAO/NSIAD-99-162, July 30, 1999). To order copies, call (202) 512-6000, fax your request to (202) 512-6061, or download the reports from GAO's Web site at http://www.gao.gov.
- 3. We reported on DoD's acquisition culture in Weapons Acquisition: A Rare Opportunity for Lasting Change (GAO/NSIAD-93-15, December 1992).
- 4. *Critical Issues in the Defense Acquisition Culture* (Defense Systems Management College, December 1994).

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